

After Final  
Amendment  
8/31/05

**Amendments to the Claims:**

*This listing of claims will replace all prior versions, and listings, of claims in the application:*

1. (Currently Amended) A sprayable, fiber-reinforced, strain-hardening hydraulically settable mortar, comprising:

- a) a cement fraction comprising one or more hydraulically setting cements other than calcium aluminate cement;
- b) a strain-hardening amount of from 0.1 to less than 4.0 volume percent of matrix interactive reinforcing fibers having a length of from about 4mm to about 30 mm, a fiber diameter of between 10  $\mu$ m, and 150  $\mu$ m, and interfacial chemical bonding of less than 4.0 J/m<sup>2</sup>;
- c) at least one non-Newtonian additive in an amount to provide a mortar viscosity such that the mortar remains pumpable and sprayable, but exhibits a higher viscosity after spraying;
- d) water in a ratio of water to the hydraulically setting cement fraction of 0.2:1 to 0.6:1;
- e) a superplasticizer in an amount effective to provide a pumpable and sprayable mortar at the water content used;
- f) a viscosity control agent in an amount of from 0.1 up to about 5 weight percent; and
- g) optionally, aggregate in an amount up to about 200% by weight relative to the weight of the sprayable mortar.

2. (Original) The sprayable mortar of claim 1, wherein said non-Newtonian additive comprises an inorganic non-Newtonian additive.

3. (Previously Presented) The sprayable mortar of claim 1, wherein at least one non-Newtonian additive is calcium aluminate cement.

4. (Previously Presented) The sprayable mortar of claim 1, wherein at least one non-Newtonian additive is an organic polymer.

5. (Previously Presented) The sprayable mortar of claim 1 wherein at least one non-Newtonian additive is an associative thickener.

6. (Original) The sprayable mortar of claim 1 wherein said reinforcing fibers are present in an amount of 0.7 to 3.0 volume percent.

7. (Original) The sprayable mortar of claim 1 wherein said reinforcing fibers are present in an amount of 1.5 to 2.5 volume percent.

8. (Currently Amended) The sprayable mortar of claim 1, wherein said reinforcing fibers comprise one or more fibers selected from the group consisting of polyarylamide fibers, ~~high modulus~~ density polyethylene fibers, and polyvinylalcohol fibers.

9. (Original) The sprayable mortar of claim 1 which exhibits a strain of at least 0.5%.

10. (Original) The sprayable mortar of claim 1 which exhibits a strain of at least 1.0%.

11. (Original) The sprayable mortar of claim 1 which exhibits a strain of at least 1.5%.

12. (Original) The sprayable mortar of claim 1, wherein said viscosity control agent comprises at least one viscosity control agent selected from the group consisting of modified celluloses and polyvinylalcohol.

13. (Cancelled).

S/N: 10/674,773  
Reply to Office Action of May 27, 2005

Atty Dkt No. UOM 0286 PUS

14 - 17. (Cancelled).